

NLE10CNT Energy-optimized Tropical Compressor R290 220-240V 50/60Hz

General

Code number	105H6179
Approvals	UL984
Compressors on pallet	80

Application

Application	LBP/MBP			
	Hz	50	60	
Frequency	Hz	50	60	
Evaporating temperature	°C	-35 to 7.2	-35 to 7.2	
Voltage range	V	187 to 242	187 to 253	
Max. condensing temperature continuous (short)	°C	60 (65)	60 (65)	
Max. winding temperature continuous (short)	°C	125 (135)	125 (135)	

Cooling requirements

Frequency	Hz	50			60		
		LBP	MBP	HBP	LBP	MBP	HBP
32°C		F ₂	F ₂	-	F ₂	F ₂	-
38°C		F ₂	F ₂	-	F ₂	F ₂	-
43°C		F ₂	F ₂	-	F ₂	F ₂	-
Remarks on application:							

Motor

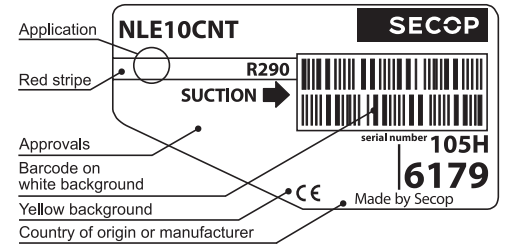
Motor type	CSIR/RSIR/RSCR		
LRA (rated after 4 sec. UL984), HST LST	A	16.4	15.0
Cut in Current, HST LST	A	16.4	18.7
Resistance, main start winding (25°C)	Ω	4.5	18.7

Design

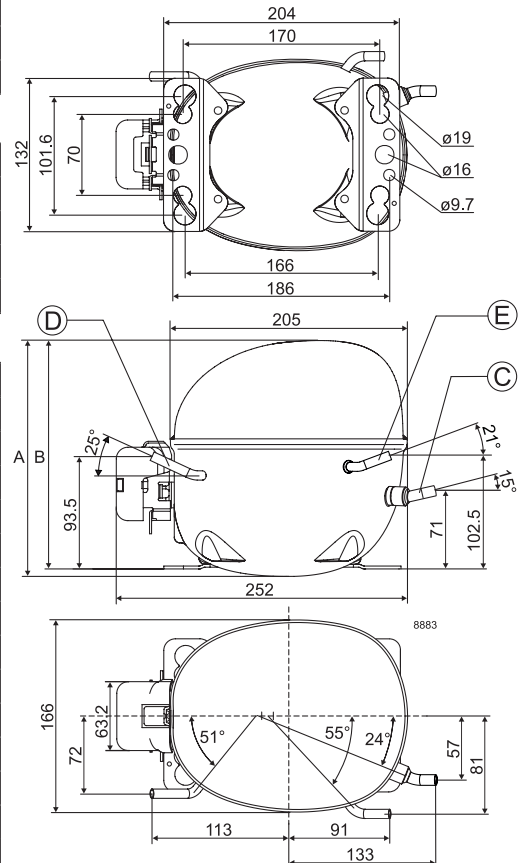
Displacement	cm ³	10.09
Oil quantity (type)	cm ³	300 (polyolester)
Maximum refrigerant charge	g	150
Free gas volume in compressor	cm ³	2360
Weight without electrical equipment	kg	11.8

Dimensions

Height	mm	A	203
		B	197
		B1	-
		B2	-
Suction connector	location/I.D. mm angle	C	8.2 15°
	material comment		Copper Rubber plug
Process connector	location/I.D. mm angle	D	6.5 25°
	material comment		Copper Rubber plug
Discharge connector	location/I.D. mm angle	E	6.5 21°
	material comment		Copper Rubber plug
Oil cooler connector	location/I.D. mm angle	F	-
	material comment		-
Connector tolerance	I.D. mm		±0.09
Remarks:			



- S = Static cooling normally sufficient
- O = Oil cooling
- F₁ = Fan cooling 1.5 m/s (compressor compartment temperature equal to ambient temperature)
- F₂ = Fan cooling 3.0 m/s necessary
- SG = Suction gas cooling normally sufficient
- = not applicable in this area



EN 12900 LBP

220V, 50Hz, CSIR/RSIR, fan cooling F₂

Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W			291	369	463	499	574	702	849	956	1015	1201	1408	1505			
Power cons. in W			246	274	303	313	331	358	383	399	406	426	443	449			
Current cons. in A			2.40	2.48	2.58	2.61	2.68	2.78	2.87	2.94	2.97	3.05	3.12	3.14			
COP in W/W			1.19	1.35	1.53	1.60	1.73	1.96	2.21	2.40	2.50	2.82	3.18	3.36			

EN 12900 MBP

220V, 50Hz, CSIR/RSIR, fan cooling F₂

Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W			268	343	433	466	537	658	795	896	951	1124	1317	1408			
Power cons. in W			249	282	314.5	326	347	378	407	425	434	457	477	485			
Current cons. in A			2.41	2.51	2.62	2.66	2.74	2.85	2.97	3.04	3.08	3.18	3.27	3.30			
COP in W/W			1.08	1.22	1.38	1.43	1.55	1.74	1.95	2.11	2.19	2.46	2.76	2.90			

ASHRAE LBP

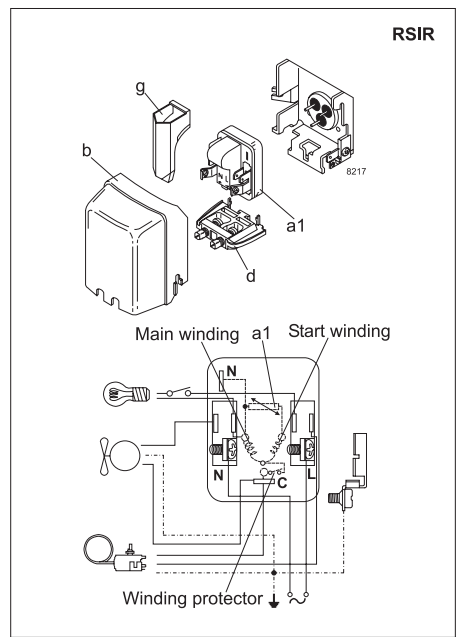
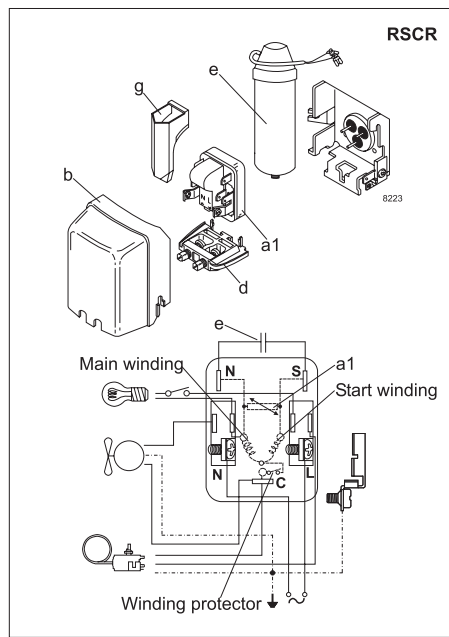
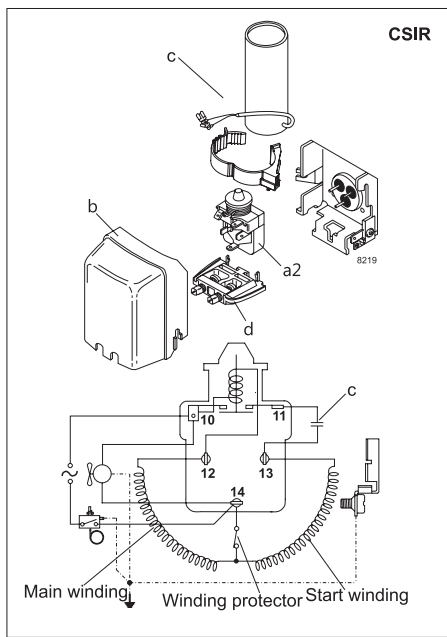
220V, 50Hz, CSIR/RSIR, fan cooling F₂

Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W			270	363	470	511	594	735	895	1012	1076	1278	1503	1610			
Power cons. in W			244	286	329	343	370	410	448	472	484	516	544	556			
Current cons. in A			2.38	2.52	2.68	2.73	2.83	2.99	3.15	3.25	3.30	3.44	3.57	3.63			
COP in W/W			1.11	1.27	1.43	1.49	1.61	1.79	2.00	2.15	2.22	2.48	2.76	2.90			

ASHRAE MBP

220V, 50Hz, CSIR/RSIR, fan cooling F₂

Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W			242	325	422	458	532	659	802	906	963	1143	1344	1440			
Power cons. in W			244	286	329	343	370	410	448	472	484	516	544	556			
Current cons. in A			2.38	2.52	2.68	2.73	2.83	2.99	3.15	3.25	3.30	3.44	3.57	3.63			
COP in W/W			0.99	1.14	1.28	1.34	1.44	1.61	1.79	1.92	1.99	2.20	2.47	2.59			



Accessories for	NLE10CNT	Figure	Code number
PTC starting device	6.3 mm spade connectors	a1	-
	4.8 mm spade connectors		-
ePTC starting device	4.8 mm spade connectors		103N0050
Starting relay	6.3 mm spade connectors	a2	117U7050
Start. capacitor 60 µF	6.3 mm spade connectors	c	117U5014
Cover		b	103N2010
Run capacitor 4 µF (optional)	6.3 mm spade connectors	e	-
	4.8 mm spade connectors		117-7119
Cord relief		d	103N1010
Protection screen for PTC		g	-

Test conditions	EN 12900		ASHRAE	
	LBP	MBP	LBP	MBP
Condensing temperature	40°C	45°C	54.4°C	54.4°C
Ambient temperature	32°C	32°C	32.2°C	35°C
Suction gas temperature	20°C	20°C	32.2°C	35°C
Liquid temperature	no subcooling		32.2°C	46.1°C

Mounting accessories	Code number	
Bolt joint for one comp.	Ø: 16 mm	118-1917
Bolt joint in quantities	Ø: 16 mm	118-1918
Snap-on in quantities	Ø: 16 mm	118-1919

EN 12900 LBP

230V, 60Hz, CSIR/RSIR, fan cooling F₂

Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W			347	441	553	596	685	838	1012	1140	1210	1431	1676	1792			
Power cons. in W			269	301	334	345	366	397	426	443	452	474	492	499			
Current cons. in A			2.06	2.15	2.24	2.28	2.34	2.44	2.54	2.60	2.63	2.71	2.79	2.81			
COP in W/W			1.29	1.46	1.66	1.73	1.87	2.11	2.38	2.57	2.68	3.02	3.41	3.59			

EN 12900 MBP

230V, 60Hz, CSIR/RSIR, fan cooling F₂

Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W			319	409	515	556	640	784	947	1066	1131	1338	1567	1675			
Power cons. in W			272	308	344	356	380	415	448	468	478	504	527	535			
Current cons. in A			2.06	2.16	2.27	2.31	2.39	2.50	2.61	2.69	2.72	2.82	2.91	2.95			
COP in W/W			1.17	1.33	1.50	1.56	1.68	1.89	2.12	2.28	2.37	2.65	2.97	3.13			

ASHRAE LBP

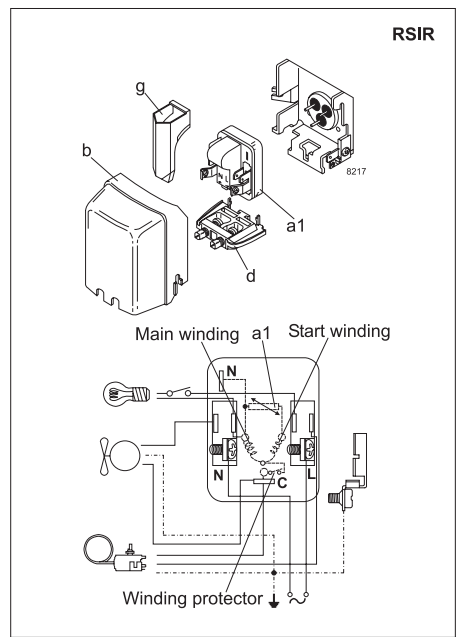
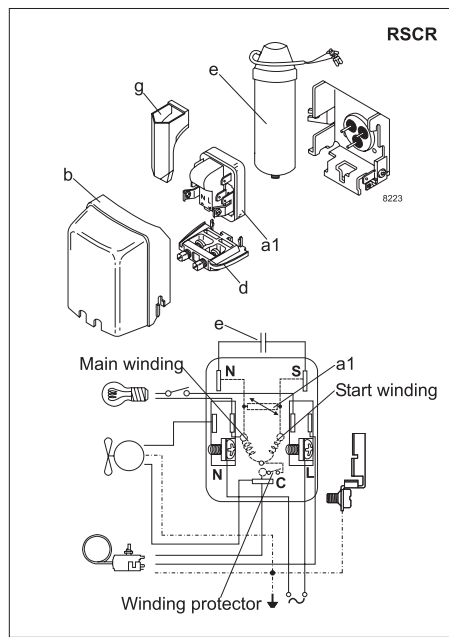
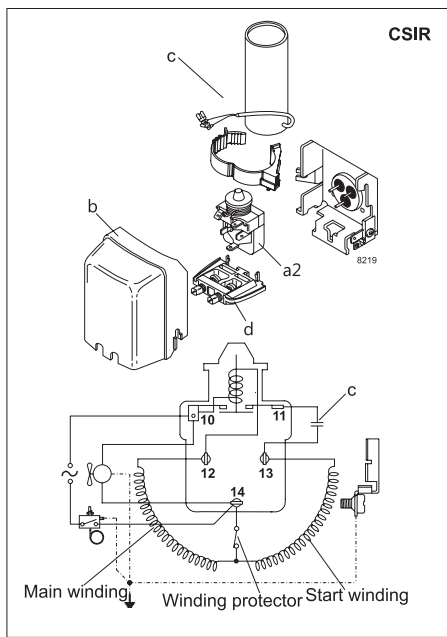
230V, 60Hz, CSIR/RSIR, fan cooling F₂

Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W			321	432	559	607	706	874	1064	1203	1278	1519	1787	1915			
Power cons. in W			268	312	357	372	401	445	487	513	526	562	594	607			
Current cons. in A			2.03	2.17	2.31	2.36	2.46	2.61	2.76	2.86	2.91	3.05	3.18	3.23			
COP in W/W			1.20	1.38	1.57	1.63	1.76	1.97	2.19	2.34	2.43	2.70	3.01	3.15			

ASHRAE MBP

230V, 60Hz, CSIR/RSIR, fan cooling F₂

Evap. temp. in °C	-45	-40	-35	-30	-25	-23.3	-20	-15	-10	-6.7	-5	0	5	7.2	10	15	20
Capacity in W			288	387	501	544	633	783	953	1077	1144	1359	1598	1711			
Power cons. in W			268	312	357	372	401	445	487	513	526	562	594	607			
Current cons. in A			2.03	2.17	2.31	2.36	2.46	2.61	2.76	2.86	2.91	3.05	3.18	3.23			
COP in W/W			1.07	1.24	1.41	1.46	1.58	1.76	1.96	2.10	2.18	2.42	2.69	2.82			



Accessories for	NLE10CNT	Figure	Code number
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	4.8 mm spade connectors		-
ePTC starting device	4.8 mm spade connectors		103N0050
Starting relay	6.3 mm spade connectors	a2	117U7050
Start. capacitor 80 µF	6.3 mm spade connectors	c	117U5014
Cover		b	103N2010
Run capacitor 4 µF (optional)	6.3 mm spade connectors	e	-
	4.8 mm spade connectors		117-7119
Cord relief		d	103N1010
Protection screen for PTC		g	-

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	LBP	MBP	LBP	MBP
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Suction gas temperature	20°C	20°C	32.2°C	35°C
Liquid temperature	no subcooling		32.2°C	46.1°C

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Bolt joint for one comp.	Ø: 16 mm	118-1917
Bolt joint in quantities	Ø: 16 mm	118-1918
Snap-on in quantities	Ø: 16 mm	118-1919

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